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10/579,856	05/17/2006	Hiroaki Miyamoto	Q94999	8091
23373	7590	08/18/2009	EXAMINER	
SUGHRUE MION, PLLC			WANG-HURST, KATHY W	
2100 PENNSYLVANIA AVENUE, N.W.			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,856	<b>Applicant(s)</b> MIYAMOTO, HIROAKI
	<b>Examiner</b> KATHY WANG-HURST	<b>Art Unit</b> 2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 03 June 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3-6,9-13 and 15-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1, 3-6, 9-13 and 15-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_

5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment filed on 6/3/2009 has been entered. Claims 1, 7, 13, 19 have been amended. Claims 2, 8, and 14 have been cancelled. Claims 1, 3-6, 9-13 and 15-25 are still pending in this application.

### ***Response to Arguments***

1. Applicant's arguments filed 6/3/2009 have been fully considered but they are not persuasive.

Regarding applicant's arguments on reception acknowledgement (page 10), Walls discusses receiving units sending acknowledgements when the data packets are received. Walls also discusses that acknowledgements, including retransmission requests, identify the data packet at issue, e.g. the sequence indicator of the received data packet. In other words, the receiving unit may identify the transmission status based on the received data information such as data sequence indicator. See at least paragraph [0032]. Therefore Walls indeed discloses reception acknowledgement.

Regarding the applicant's argument that Walls fails to teach or suggest "the means controls the transmission rate of the reception acknowledgement signal based on the number of retransmission rate of the reception acknowledgement signal based on the number of retransmissions of the data frame" (pages 10-11), the examiner respectfully disagrees. Walls discusses in paragraphs [0032][0036][0038] that the receiving unit receives data packets from transmitting unit, recognizes from the received data packets that some are missing based on data sequence indicators, sends

Art Unit: 2617

retransmission requests if data are missing, and slows down the rate of sending retransmission request /reception acknowledgement when there are too many retransmission requests. Therefore it is clear that Walls teaches "the means controls the transmission rate of the reception acknowledgement signal based on the number of retransmission rate of the reception acknowledgement signal based on the number of retransmissions of the data frame".

Concerning the applicant's arguments regarding combination of references, both of the references are from the same field, i.e. communication systems and concern analogous topics. Therefore, the examiner contends that the references would be combinable to one skilled in the art.

Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follow.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6, 9-13 and 15-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walls et al. (US 2004/0156315) in view of Kowalski (US 2003/0223365).

Regarding claims 1, 7, and 13, Walls discloses a data communication system comprising: means of controlling a transmission rate of a reception acknowledgement

signal transmitted from a wireless station in response to reception of a data frame from another wireless station (see e.g. [0032][0036][0038]) receiving unit receiving data packets from transmitting unit, receiving unit sending retransmission request if receiving unit recognizing some of the received data packets are out of sequence which indicates that some data packets are missing, receiving unit slowing down the retransmission request rate/reception acknowledgement rate if there are too many retransmission requests), wherein the means controls the transmission rate of the reception acknowledgement signal based on the number of retransmissions of the data frame (see e.g. [0032][0036][0038] slowing down retransmission request rate if there are too many retransmission requests).

Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Kowalski teaches the data communication system is a wireless communication system and packet transmission station is a wireless station (see at least [0002][0003] [0004][0028][0032]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Kowalski, thus improve the flexibility of the network and allow users to access a network wirelessly.

Regarding claims 3, 9 and 15, Walls discloses the data communication system according to claim 2, wherein the means makes the transmission rate lower than a

Art Unit: 2617

current transmission rate when the number of retransmissions of the data frame is greater than a first predetermined value ([0038] [0036]).

Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Kowalski teaches the data communication system is a wireless communication system and packet transmission station is a wireless station (see at least [0002][0003] [0004][0028][0032]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Kowalski, thus improve the flexibility of the network and allow users to access a network wirelessly.

Regarding claim 4, 10 and 16, Walls discloses the data communication system, wherein the means controls the transmission rate of the reception acknowledgement signal based on the number of successive successes for the data frame ([0032]; [0036]; [0039] it is equivalent of saying more packets are successfully received and therefore fewer retransmission requests are made).

Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Kowalski teaches the data communication system is a wireless communication system and packet transmission station is a wireless station (see at least [0002][0003] [0004][0028][0032]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Kowalski, thus improve the flexibility of the network and allow users to access a network wirelessly.

Regarding claims 5, 11 and 17, Walls discloses the data communication system according to claim 4, wherein the means makes the transmission rate higher than the current transmission rate when the number of retransmission requests is below a predetermined value ([0039] it is equivalent of saying more packets are successfully received and therefore fewer retransmission requests are made).

Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Kowalski teaches the data communication system is a wireless communication system and packet transmission station is a wireless station (see at least [0002][0003] [0004][0028][0032]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Kowalski, thus improve the flexibility of the network and allow users to access a network wirelessly.

Regarding claims 6, 12, 18, 20-25, Walls discloses a generic communication system according to any one of claims 1 to 5 ([0003][0036]), but fails to disclose

Art Unit: 2617

communication system is a wireless communication system wherein the wireless station and another wireless station are an access point and a mobile communication terminal in a wireless LAN system.

Kowalski teaches that communication system is a wireless communication system wherein the wireless station and another wireless station are an access point and a mobile communication terminal in a wireless LAN system (see at least [0002][0003] [0004][0028][0032]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Kowalski, thus improve the flexibility of the network and allow users to access a network wirelessly.

Regarding claim 19, Walls discloses a computer readable medium containing a program for use by or in connection with the instruction execution system ([0041]) that allows a computer to perform an operation of a packet transmission station that transmits a reception acknowledgement signal in response to a data frame transmitted from another packet transmission station, the program comprising a process of controlling a transmission rate of the reception acknowledgement signal based on the number of retransmissions of the data frame ([0036]).

Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Kowalski teaches the data communication system is a wireless communication system and

Art Unit: 2617

packet transmission station is a wireless station (see at least [0002][0003]  
[0004][0028][0032]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Kowalski, thus improve the flexibility of the network and allow users to access a network wirelessly.

***Conclusion***

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is

(571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/  
Examiner, Art Unit 2617

/NICK CORSARO/  
Supervisory Patent Examiner, Art Unit 2617